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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,393	12/12/2003	Pierrick Guingo	ALC 3109	8508

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EXAMINER	
ANWARI, MACEEH	
ART UNIT	PAPER NUMBER
2109	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/733,393	GUINGO ET AL.	
	Examiner	Art Unit	
	Maceeh Anwari	2109	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/12/2003 &6/16/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This is the initial Office action based on the 10/733393 application filed on December 12, 2003. Claims 1-26, as originally filed, are currently pending and have been considered below.

Claim Objections

1. Claim 3 is objected to because of the following informalities: the applicant has an issue with number agreement, the word "interface" is used in the first instance when in fact it should be "interfaces". Appropriate correction is required.

2. Claim 19 is objected to because of the following informalities: The applicant misspells the word "identifying". Appropriate correction is required.

3. Claim 22 is objected to because of the following informalities: The applicant uses the compound word "cannot" as two separate words. Appropriate correction is required.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-7, 9-11, and 14-23 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The aforementioned claims lack a practical application of a judicial exception (law of nature, abstract idea, naturally occurring phenomenon) since it fails to produce a useful, concrete and tangible result.

Specifically, the claimed subject matter does not produce a tangible result because the claimed subject matter fails to produce a result that is limited to having a

real world value rather than a result that may be interpreted to be abstract in nature as, for example, a thought, a computation, or manipulated data. More specifically, the claimed subject matter provides for "aggregating flow records for transmission to a collector;" as well as "selecting", "polling", "recording", "initiating", "subtracting", "accounting", "calculating" and "collecting." The produced results remain in the abstract and, thus, fail to achieve the required status of having a real world value.

Claims 14-18 & 22-26 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The aforementioned claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 U.S.C 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best functionally descriptive material per se.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 9-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 9-10 fail to comply with the enablement requirement because the applicant does not mention the methodology behind how the: "flow records are aggregated using a serial/parallel collection of flow table data." Further the applicant fails to mention what a "serial/parallel collection of flow table data" is.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1- 18 & 22-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Kanekar et al. (hereinafter Kanekar), Patent NO.: US 6751191 B1.

Kanekar teaches:

Claim 1:

> A method of monitoring traffic flows in a domain of a communications network (Col.1, lines 6-12 & lines 17-19), the domain being logically arranged as a virtual router network having virtual interfaces at edge nodes of the domain (Col. 9, lines 3-21), comprising the steps of: a) determining, at a virtual interface and in dependence upon a

rule set, whether a packet belongs to a flow to be monitored (Figure 13A-13B & Col. 14, lines 14- 40); b) accounting, responsive to the packet belonging to a flow to be monitored, the packet in a flow record corresponding to that flow (Figure 13A-13B & Col. 14, lines 14-40); and c) aggregating the flow records for transmission to a collector(Figure 13A-13B & Col. 14 lines 30-59; reads on the limitation of a collector, the tables mentioned collect data on the packets).

Claim 2:

The method as defined in claim 1, wherein the method is performed at a plurality of the virtual interfaces (Figure 7 & Col. 9, lines 3-23).

Claim 3:

The method as defined in claim 2, further comprising an initial step of selecting one of the virtual interfaces as a master virtual interface (Col. 8, Lines 15-40).

Claim 4:

The method as defined in claim 3 wherein the step of selecting the master virtual interface is done by polling each of the virtual interfaces to determine which one best satisfies a selection criteria (Col. 8, lines 15-40; the polling is conducting inherently because it is mentioned in lines 26-31 that the first router to come up will have the greater capacity for handling incoming and outgoing packets).

Claim 5:

The method as defined in claim 4 wherein the selection criteria includes CPU usage, traffic handling capability and memory capacity (Col. 8 lines 26-31; reads on the three limiting features above because all three feature will determine inherently the router with the greater capacity for incoming and outgoing packets).

Claim 6:

The method as defined in claim 3, further comprising following the selecting step, initiating, by the master virtual interface, distribution of the rule set to the other virtual interfaces (Col. 2, lines 27-48; shows the utilization of Internet Protocol (IP) which has rule sets that it is operated by & Col. 8, lines 15-40; reads on the limitation of the rule set being distributed through out the network).

Claim 7:

The method as defined in claim 3 comprising following the selection step, by the master virtual interfaces, collecting aggregated flow records from the other virtual interfaces (Col. 8, lines 15-40; reads on the limitation of a collector, the tables act as the collectors).

Claim 8:

The method as defined in claim 7, further comprising the step of sending, by the master virtual interface, the aggregated flow records to the collector (Col. 8, lines 15-18; reads on this limitation because it shows how

the master is responsible for actively forwarding packets while the slave functions in standby).

Claim 9:

The method as defined in claim 7 wherein the flow records are aggregated using a serial collection of flow table data (Figure 13A-13B & Col. 14 lines 30-59).

Claim 10:

The method as defined in claim 7 wherein the flow records are aggregated using a parallel collection of flow table data (Figure 13A-13B & Col. 14 lines 30-59).

Claim 11:

The method as defined in claim 7 wherein the aggregated flow records are provided to the collector using either a push or a pull collector operation (Col. 8, lines 15-40; reads on this limitation because all actions fall under either a push or pull operation).

Claim 12:

The method as defined in claim 6 wherein a service manager initiates the triggering selection process by sending a new or updated rule set to the master (Col. 2, lines 25-48; shows the utilization of Internet Protocol (IP) which has rule sets that it is operated by, the default gateway also reads on the limitation of a service manager & Col. 8, lines 15-40;

since the master functions actively it would be responsible for updating the rule set).

Claim 13:

The method as defined in claim 12 wherein the service manager receives aggregated flow records from the collector (Figure 13A-13B & Col. 14 lines 30-59; reads on the limitation of a collector, and aggregating & Col. 2 lines, 25-48 & Col. 8, lines 15-40; reads on the limitation of the service manager receiving the records from the collector).

Claim 14:

A system for monitoring traffic flows in a domain of a communications network (Col.1, lines 6-12 & lines 17-19), the domain being logically arranged as a virtual router network having virtual interfaces at edge nodes of the domain (Col. 9, lines 3-21), the system comprising: means at a virtual interface for determining in dependence upon a rule set, whether a packet belongs to a flow to be monitored (Figure 13A- 13B & Col. 14, lines 14- 40); means for accounting, responsive to the packet belonging to a flow to be monitored, the packet in a flow record corresponding to that flow; and means for aggregating the flow records for transmission to a collector (Figure 13A-13B & Col. 14 lines 30-59; reads on the limitation of a collector, the tables mentioned collect data on the packets).

Claim 15:

The system as defined in claim 14 having multiple virtual interfaces wherein one of said virtual interfaces is selected as a master virtual interface (Figure 7 & Col. 9, lines 3-23; reads on the limitation multiple virtual interfaces & Col. 8, Lines 15-40; reads on the limitation of selecting a master).

Claim 16:

The system as defined in claim 15 wherein the master virtual interface has means to distribute rule sets to other virtual interfaces (Col. 2, lines 27-48; shows the utilization of Internet Protocol (IP) which has rule sets that it is operated by & Col. 8, lines 15-40; reads on the limitation of the rule set being distributed through out the network).

Claim 17:

The system as defined in claim 16 wherein the master virtual interface has means to collect aggregated flow records from the other virtual interfaces and to report the aggregated flow records to a collector (Figure 13A-13B & Col. 14 lines 30-59; reads on the limitation of a collector, and aggregating & Col. 2 lines, 25-48 & Col. 8, lines 15-40; reads on the limitation of the service manager receiving it from the collector).

Claim 18:

The system as defined in claim 17 having a service manager to initiate a selection of the master virtual interface and to collect aggregated

flow records from the collector (Figure 13A-13B & Col. 14 lines 30-59; reads on the limitation of a collector, and aggregating & Col. 2 lines, 25-48 & Col. 8, lines 15-40; reads on the limitation of the service manager receiving the records from the collector).

Claim 22:

A system for measuring per-flow traffic delay between two routers having synchronized clocks (Figure 11A-11B & 12A & Col. 10 lines 54-65), comprising: means for calculating, at each of the routers, a key for every packet in the flow, wherein the key uniquely and invariantly identifies a corresponding packet in the flow (Figure 11B & Col. 3 lines 34-49; this is an inherent feature with packet transmission over the internet (TCP/IP) where each packet within a group is numbered and uniquely identified between routers/nodes—each packet has within it's packet header a number in association to the number of packets being sent. For example a packet would have packet 1 of 43; hence identifying it from the others and allowing the router/node to expect more or letting it know that it's finished.); means for selecting, at each of the routers using the key, a packet to be monitored (Col 3 lines 34-49; reads on this limitation because the packet is monitored using it's header); means for recording, at each of the routers, a timestamp upon selection of each packet (Figure 12C & 13A-B & Col 3 lines 34-49; the packet header contains what a packet is sent by it's time to live (TTL) feature); and means for subtracting the

timestamps to determine the delay for the packet (Col. 10 lines 54-65; reads on the limitation of determining the delay for the packet).

Claim 23:

The system as defined in claim 22 wherein the routers are edge routers in a virtual router network (Col. 1 lines 10-12).

Claim 24:

The system as defined in claim 23 wherein one of said edge routers is selected as a master edge router and packet filtering information is aggregated and correlated at said master edge router (Figure 13A-13B & Col. 14 lines 30-59; reads on the limitation of aggregating & Col. 2 lines, 25-48 & Col. 8, lines 15-40; reads on the correlation).

Claim 25:

The system as defined in claim 23 wherein one of said edge routers is selected as a master edge router and the aggregation and correlation processes of packet filtering information are distributed among the edge routers, the results being sent and compiled at said master edge router (Figure 13A-13B & Col. 14 lines 30-59; reads on the limitation of aggregating & Col. 2 lines, 25-48 & Col. 8, lines 15-40; reads on the correlation, and this happening at the master).

Claim 26:

The system as defined in claim 24 having a service manager to receive said packet filtering information (Col. 2, lines 25-48, where the default gateway reads on the limitation of a service manager).

9. Claims 19-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Klinker et al. (hereinafter Klinker) US Publication NO.: 2002/0145981 A1.

Klinker teaches:

Claim 19:

A method of measuring per-flow traffic delay between two routers having synchronized clocks (Col. 11, lines 17-22), comprising the steps of: a) calculating, at each of the routers, a key uniquely and invariantly identifying a corresponding packet in the flow (Col. 7, lines 55- 60; reads on the limitation of the key, because the header of IP packets are used to identify a corresponding packet in the flow); b) selecting, at each of the routers using the key, a packet to be monitored (Col. 7, lines 55- 60; reads on the limitation of the key, because the header of IP packets are used as keys for monitoring; and Figure 6-7, Col. 12, lines 42-52, test packet reads on the limitation of a packet to be monitored ; c) recording, at each of the routers, a timestamp upon selection of each packet (Col. 11, lines 29-37); and d) subtracting the timestamps to determine the delay for the packet (Col. 9, lines 66-67 & Col. 10, lines 1-22 & Col. 11, lines 29-37).

Claim 20:

The method as defined in claim 19 wherein multiple packets are monitored and an average delay for the multiple packets is calculated (Col. 9, lines 66-67 & Col. 10, lines 1-22 & Col. 11, lines 29-37).

Claim 21:

The method as defined in claim 20 wherein if a key cannot be calculated within a given time interval indicating lost packets the calculating step is stopped (Col. 11, lines 65-67 & Col. 12 lines 1-25; reads on the limitation of lost packets and since the packet is lost the calculating step would obviously be stopped).

Claim 22:

A system for measuring per-flow traffic delay between two routers having synchronized clocks (Col. 11, lines 17-22), comprising: means for calculating, at each of the routers, a key for every packet in the flow, wherein the key uniquely and invariantly identifies a corresponding packet in the flow (Col. 7, lines 55- 60; reads on the limitation of the key, because the header of IP packets are used to identify a corresponding packet in the flow); means for selecting, at each of the routers using the key, a packet to be monitored (Col. 7, lines 55- 60; reads on the limitation of the key, because the header of IP packets are used as keys for monitoring; and Figure 6-7, Col. 12, lines 42-52, test packet reads on the limitation of a packet to be monitored); means for recording, at each of the routers, a timestamp upon selection of each packet (Col. 11, lines 29-37); and

means for subtracting the timestamps to determine the delay for the packet (Col. 9, lines 66-67 & Col. 10, lines 1-22 & Col. 11, lines 29-37).

Claim 23:

The system as defined in claim 22 wherein the routers are edge routers in a virtual router network (Figures 2-3).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maceeh Anwari whose telephone number is 571-272-7591. The examiner can normally be reached on Monday-Friday 7:30-5:00 PM ES.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joe Del Sole can be reached on 571-272-1130. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Joseph S Del Sole

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3/27/07